Marksman

Extreme Series

Installation Manual

Model: X9

For Technical Assistance, please call (800) 638-3600,
or visit www.magnadyne.com

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference; and
(2) This device must accept any interference received, including interference that may cause undesired operation.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

Table of Contents

Installer Warnings 2-3

Component Placement 3

Wiring Harness Quick Reference 3-5

Wiring
- Starter and Power Harness Wiring 5-7
- Door Lock Output Wiring 7-10
- Accessory Alarm and Remote Start Wiring 11-16

Transmitter Programming 17

Alarm Feature Programming 17-21

Remote Start Feature Programming 21-22

Engine Crank Detection Programming 23-25

Remote Start Shutdown Diagnostics 25

Safety Testing Your Installation 25

Shock Sensor Test Mode 26

Return to Factory Default Settings 27

Wiring Diagram 28

Installer Warnings

- Due to the complexity of this system, installation must only be performed by a qualified professional installer. This remote start and alarm system is NOT a “Do It Yourself” product.
- This remote starter and alarm system is designed to be installed on fuel injected gasoline or diesel vehicles with an automatic transmission ONLY. Installation of this system on a vehicle with a manual transmission (Stick Shift) is dangerous and is contrary to it’s intended use.
- This system must be installed and wired through a safety switch so it will not start the engine while in any forward or reverse gear. This is normally accomplished by connecting the systems provided safety wire to the vehicles electronic Neutral Safety switch located on the transmission shifter.
- Some automatic transmission vehicles may have a mechanical type park safety lock system instead of electrical safety switch. This mechanical type system does not interrupt the starter circuit when the transmission is any gear and does not offer the 100% level of safety required for remote starting purposes. The next best safety connection point on this type of vehicle would be the vehicle parking brake switch. This requires the user to set the parking brake prior to activating the remote starting system.
- Once you install this system, you must verify that the vehicle will not start in any forward or reverse gear. Regardless of the type of vehicle.
- Do not install any component near the brake, gas pedal or steering linkage.
- Some vehicles have a factory installed transponder immobilizer system that can severely complicate the installation. There is a possibility that this system can not be installed on some immobilizer equipped vehicles.
- Most vehicles have an SRS air bag system. Use extreme care and do not probe any wires of the SRS system. Disconnect the vehicle (+) or (-) battery cable before installing this system on the vehicle.
- Use conventional crimp lock type connectors on all low current wiring connections. Poor wiring, i.e. taped joints, will introduce unreliability into the remote start and alarm system and may result in false alarms, incorrect or failed operation.

Installer Warnings (continued)

- All wires that operate at currents higher than 10A should be soldered to insure a long lasting connection.
- Install wiring neatly under carpets or behind trim to prevent possible damage to wires.
- For dealer technical assistance, please call (800) 638-3600 or visit www.magnadyne.com

Component Placement

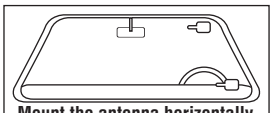
Windshield Receiver/Antenna

- The combination windshield receiver/antenna mounts on the windshield (inside).
- We suggest you mount it on the lower left-hand side of the windshield.

Warning! Do not mount in such a manner that it obstructs the driver's view.

- The receiver/antenna whip can be vertical or horizontal.

1. Remove the protective tape backing.
2. Carefully align the receiver/antenna and apply to windshield.
3. Route the black connecting cable behind the trim and connect to receiver/antenna.
4. Connect the other end to the control module.



Mount the antenna horizontally for best reception.

Dual-Zone Shock Sensor

Select a mounting location within the passenger's compartment or trunk. Do not mount in the engine compartment or in any location where it will get wet, greasy or will be subject to heat, direct or indirect. To achieve the best overall level of protection, select a mounting location that is centrally located in the vehicle. It will be necessary for the shock sensor to be somewhat accessible to make the correct sensitivity adjustment. The mounting surface should be as flat as possible for best sensitivity. The sensor can be mounted in any position as long as it is solidly mounted.

Valet Switch

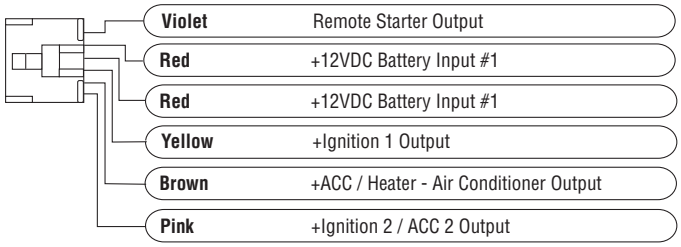
Select a mounting location for the switch that is easily accessible to the driver of the vehicle. The switch does not have to be concealed, however, concealing the switch is always recommended, as this provides an even higher level of security to the vehicle. Mount the valet switch in a hidden but accessible location. Route the valet switch wires to the control module.

LED Status Indicator

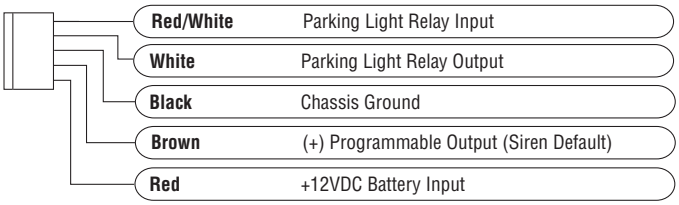
The LED indicator status should be mounted in a highly visible area. Leave at least 6mm of space behind the mounting location for LED housing. Once a suitable location is chosen, drill a 1/4" hole. Run the LED wires through the hole then press the 2-pin LED housing into the place. Route the LED wires to the control module.

Harness Quick Reference

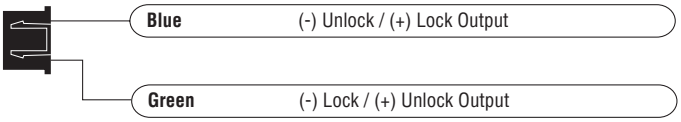
HC1 8-Pin Remote Start Harness



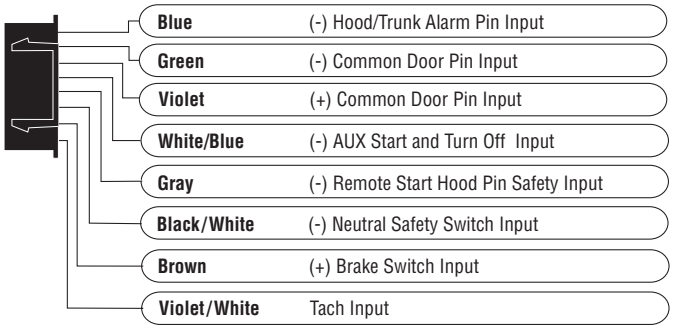
Harness Quick Reference (continued)



HC3 3-Pin Door Lock Harness

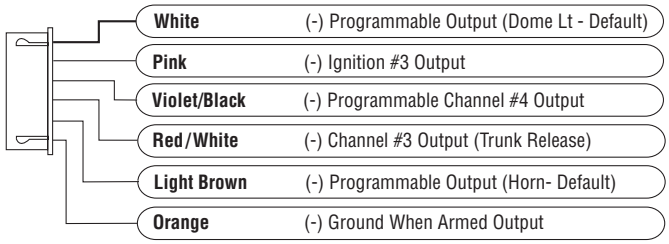


HC8 8-Pin Accessory Harness



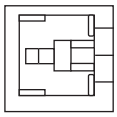
Harness Quick Reference (continued)

HC6 6-Pin Accessory Harness


White (-) Programmable Output (Dome Lt - Default)
Pink (-) Ignition #3 Output
Violet/Black (-) Programmable Channel #4 Output
Red/White (-) Channel #3 Output (Trunk Release)
Light Brown (-) Programmable Output (Horn- Default)
Orange (-) Ground When Armed Output

Wiring

HC1: White 6-Pin High Current Remote Starter Harness



The method that the remote starter uses to start the vehicle is a duplicate of the ignition switch function. Below, is an explanation of the 3 basic functions of the ignition switch. Since this installation will require analysis of the ignition switch functions, it is recommended that you make the three connections below at the ignition switch harness directly.

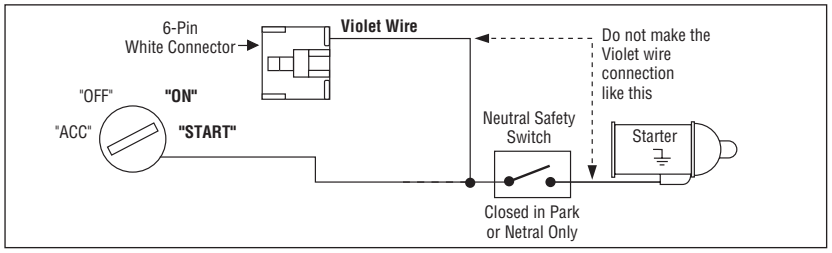
Violet Wire: Starter Output

Careful consideration for the connection of this wire must be made to prevent the vehicle from starting while in gear. Understanding the difference between a mechanical and an electrical Neutral Start Switch will allow you to properly identify the circuit and select the correct installation method. In addition you will realize why the connection of the safety wire is required for all mechanical switch configurations.

WARNING! Failure to make this connection properly can result in personal injury and property damage.

In all installations it is the responsibility of the installing technician to test the remote start unit and assure that the vehicle can not start via RF control in any gear selection other than park or neutral.

In both mechanical and electrical neutral start switch configurations, the connection of the “Violet” wire will be made to the “Starter Side” of the low current start solenoid wire at the ignition switch. This wire must have +12 volts when the ignition switch is turned to the “START” (crank) position only. Cut the starter wire and connect the Violet wire to the Starter Side of the cut wire. DO NOT connect the Violet wire to the starter side of a mechanical neutral safety switch. Failure to connect the Violet wire to the ignition switch side of the neutral safety switch can result in personal injury and property damage (see Neutral Start Safety Test for further details).



HC1: White 6-Pin High Current Remote Starter Harness (continued)

Red Wires (2): +12V Power Input

Remove the two 20A fuses prior to connecting these wires and do not replace them until the harness has been plugged into the control module. These wires are the source of current for all the circuits the relay harness will energize. They must be connected to a high current source. Connection to 12V battery terminal recommended.

Yellow Wire: Ignition 1 Output

Connect the Yellow wire to the ignition 1 wire from the ignition switch. The ignition wire should receive +12 volts when the ignition key is in the "ON" or "RUN" and "START" or "CRANK" position. When the ignition is turned "OFF", the ignition wire should receive "0" voltage. **The yellow wire must be connected.**

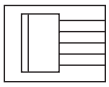
Pink Wire: Ignition 2 Output

Some vehicles have 2 ignition wires that must be powered. Connect the "Pink" wire to the ignition 2 wire from the ignition switch. No connection required on vehicles without second ignition.

Brown Wire: Accessory Output, Heater/AC Output

Connect the Brown wire to the accessory wire that powers the climate control system. An accessory wire will show +12 volts when the ignition switch is turned to the "ACCESSORY" or "ON" and "RUN" positions, it will show 0 volts when the key is turned to the "OFF" and "START" or "CRANK" position. There will often be more than one accessory wire in the ignition harness. The correct accessory wire will power the vehicle's climate control system. Some vehicles may have separate wires for the blower motor and the air conditioning compressor. In such cases, it will be necessary to add a relay to power the second accessory wire.

HC2: White 5-Pin Power Harness



Red/White Stripe: Parking Light Relay Input

The Red/White wire has already been assembled to work with a +12 volt switched parking light system (most vehicles). For vehicles with ground switched parking light activation cut this wire and connect it to ground.

White Wire: Parking Light Relay Output, + or - Selectable

Connect the White wire to the parking light wire coming from the headlight switch. Do not connect the White wire to the dashboard lighting dimmer switch (damage to the dimmer will result). The limitation of the White wire is 10 amp maximum. Do not exceed this limit or damage to the alarm and parking relay will result.

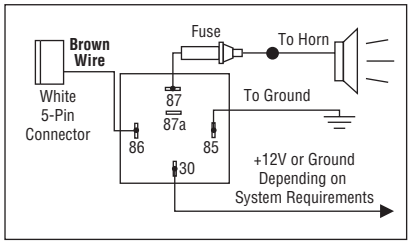
Black Wire: System Ground

This is main ground connection of the alarm module. Make this connection to a solid section of the vehicle chassis. Do not connect this wire to any existing ground wires supplied by the factory wire loom, make the connection to the vehicle's chassis directly.

Brown Wire: (+) Programmable Output - Siren Default Setting

By default, the Brown wire is the positive (+) output connection for the siren. Current capacity is 2 amps. Make connection to the (+) red wire from the siren. Connect the (-) black wire coming from the siren to a good chassis ground.

Option: (+) Horn Output (See "Alarm Feature Programming" to change the function to horn)
Connect this wire to the existing vehicle's horn relay trigger. Some vehicle horn systems may be (-) trigger and a relay will need to be added for proper operation as shown.



Red Wire: System Power, +12V Constant

The "Red" wire supplies power to the system. Connect this wire to a constant +12 volt source.

HC3: Black 3-Pin Door Lock Harness

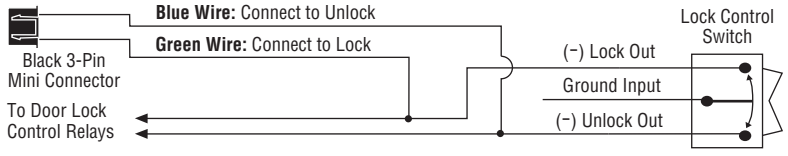
Blue Wire: (+/-) Door Lock Control

If the door lock control system on the vehicle is (-) type, connect the Blue wire to the unlock wire from the door lock switch . If the door lock control system on the vehicle is (+) type, connect the Blue wire to the lock wire from the door lock switch.

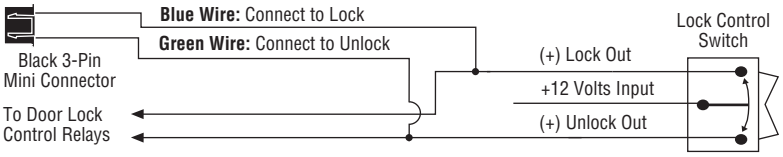
Green Wire: (+/-) Door Lock Control

If the door lock control system on the vehicle is (-) type, connect the Green wire to the lock wire from the door lock switch . If the door lock control system on the vehicle is (+) type, connect the Green wire to the unlock wire from the door lock switch.

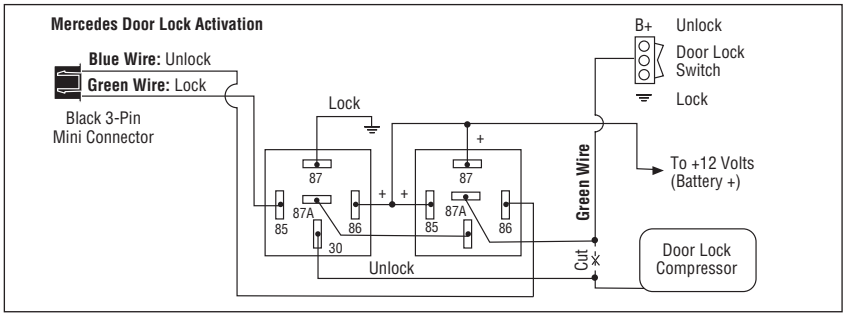
3 Wire Ground Trigger Door Lock System

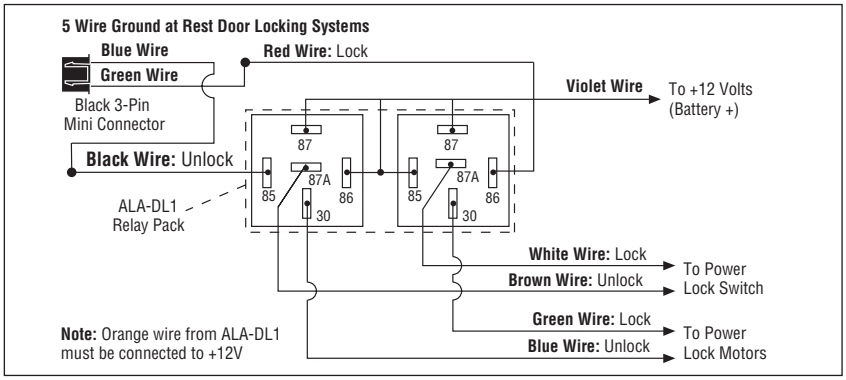


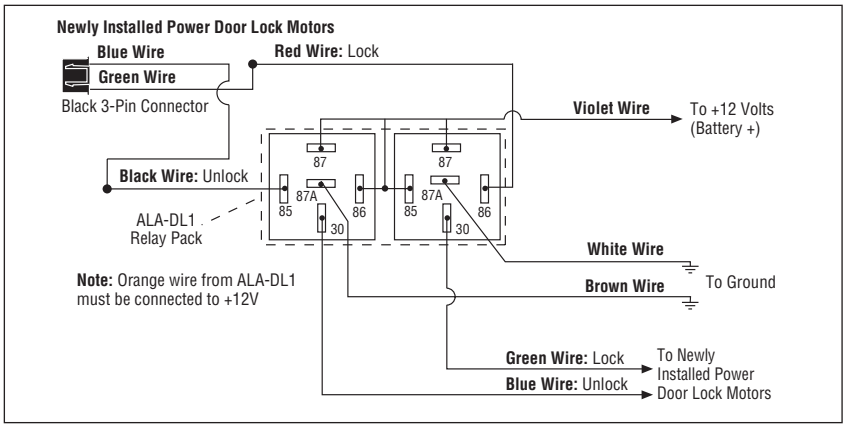
3 Wire Positive Trigger Door Lock System



HC3: Black 3-Pin Door Lock Harness (continued)





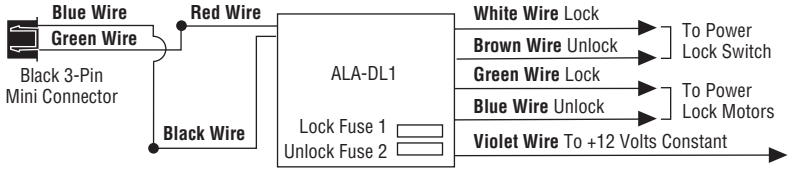


HC3: Black 3-Pin Door Lock Harness (continued)

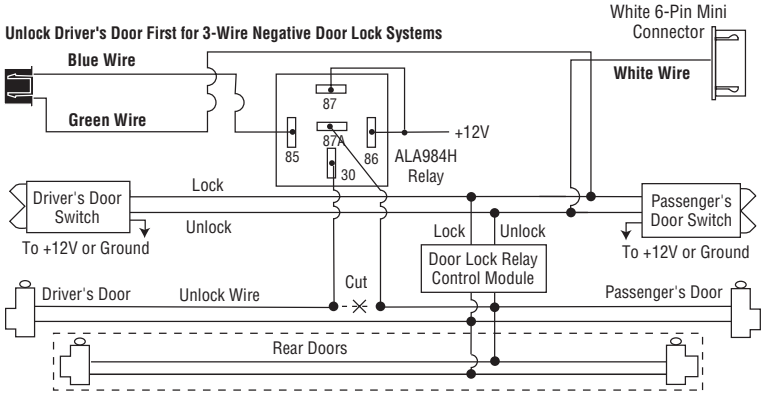
One Wire Multiplexing Door Locking Systems
Some vehicle's (Chrysler, Mazda and Ford Probe and others) use one wire to lock and unlock the doors. Example: When the door lock controller sees a signal thru a resistor it will unlock. If a signal is received without a resistor the doors will lock. Some use 2 resistors. One for lock and one for unlock. We have developed patented plug-in fuse resistors for this application. Simply remove the fuse from our door lock module and replace with correct resistor value fuses that matches the vehicles door lock switch.

Wiring:

1. Connect both the green (lock) and the blue (unlock) wires to the vehicles one wire lock/unlock wire.
2. Connect our violet polarity input wire to +12v or to ground. To match vehicles door lock polarity.
3. The white and the brown wires will not be used.

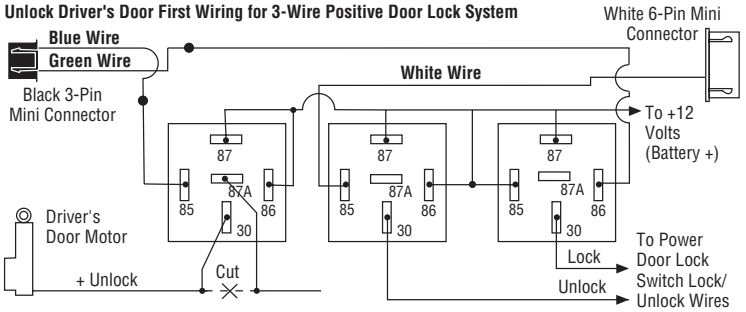


Note: Orange wire from ALA-DL1 must be connected to +12V.

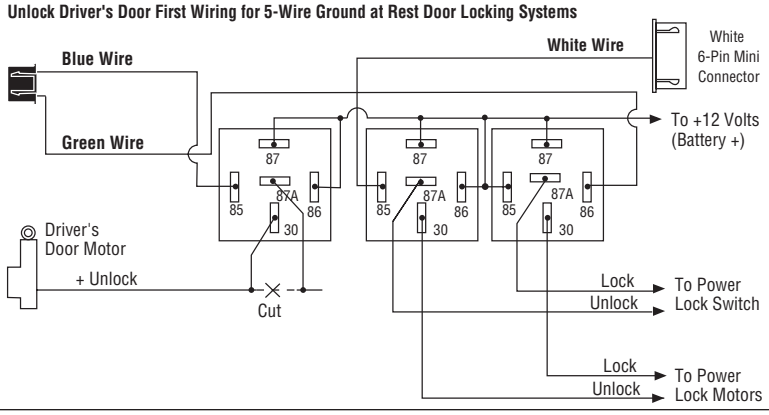


HC3: Black 3-Pin Door Lock Harness (continued)

Unlock Driver's Door First Wiring for 3-Wire Positive Door Lock System



Unlock Driver's Door First Wiring for 5-Wire Ground at Rest Door Locking Systems



HC8 Black 8-Pin Connector

Blue Wire: (-) Ground Instant Trigger Input (Zone 2)

This wire is the ground trigger input wire for hood/trunk pin switches.

Green Wire: (-) Door Trigger Input (Zone 3)

The Green wire is the ground trigger input wire for negative door pin switch.

Violet Wire: (+) Door Trigger Input (Zone 3)

The Violet wire is the positive trigger input wire for positive door pin switch.

White/Blue Wire: AUX Start and Turn Off Input

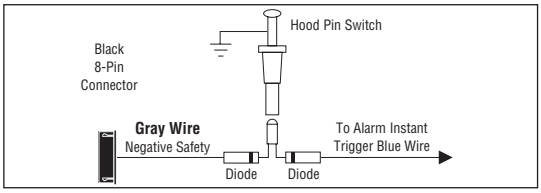
This wire can turn on and off the remote start system each time it sees a momentary ground signal. This wire is normally used for testing or activating the remote starter from an after-market alarm system.
A common connection point would be at the trunk release wire or the door lock wire.

Gray Wire: (-) Hood Safety Shut Down Input

The Gray wire provides instant shutdown for the remote start when it is grounded. Connect the Gray wire to an existing hood pin switch or install the one provided in this kit. This wire must be routed through a grommet in the firewall and connected to the hood pin switch. If the hood pin switch is also to be used as an alarm system trigger, diodes are required as shown.

Important! This connection is a safety wire and must be connected as shown and tested as specified. Failure to do so may result in personal injury or property damage.

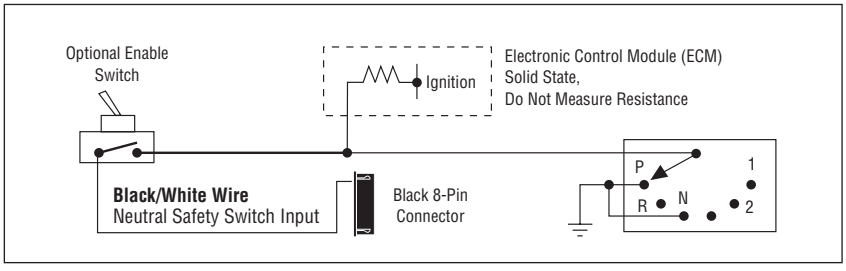
Note: The Gray wire can also be used as the "Brake Safety" connection if the vehicle brake light circuit switches a ground signal to the brake lights. An isolation diode must be used and connected to the output of the brake switch.



Black/White Wire: (-) Neutral Safety Switch Input, (-) Remote Start Enable Toggle Switch Input

The Black/White wire is a safety input wire. The remote start unit will not activate unless this wire is grounded. When this wire is disconnected from ground, the remote start system is disabled.

1. The primary connection point for the Black/White wire is at the Neutral Safety Switch located on/at the transmission shifting lever. The switch output must be GROUNDED when the shifter lever is in the PARK position.



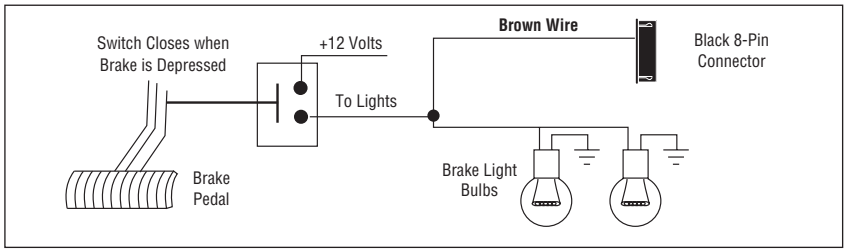
HC8 Black 8-Pin Connector (continued)

2. The second best connection point for the Black/White wire is at the Parking Brake Switch output wire. Make sure that when the parking brake is engaged that the output wire of the switch is grounded.
3. An optional remote start toggle switch can be added to temporarily disable the Remote Start Device. It can prevent the vehicle from being remote started accidentally. This feature is useful if the vehicle is being serviced or stored in an enclosed area. To disable the remote start, move the optional remote start enable toggle switch to the OFF position. To enable the remote start, move the optional remote start enable toggle switch to the ON position.

Note: When the Black/White wire is not used for it's intended safety purpose, connect the Black/White wire to the "Ground" or remote start system will not function.

Brown Wire: Positive Safety Shut Down Input

This wire provides instant shutdown for the remote start, when it receives +12 volts. If the brake lights switch in the vehicle switches +12 volts to the brake light circuit, connect this wire to the output side of the brake switch. This will allow the remote start to shut down if an attempt is made to operate the vehicle without the key while running under the control of the remote start. A relay may be required if the brake light switch is (-) type.



Violet/White Wire: (-) Tachometer Signal Connection

This input provides the remote start system with information about the engine's revolutions per minute (RPM). It can be connected to the negative side of the coil in vehicle with conventional coils. In multi-coil and high energy ignition system locating a proper signal may be more difficult. Once connected, you must program the Start Feature Stage 2 to "Tachometer Checking Type" and teach the system the RPM signal (see Start Feature Stage 2 Programming).

In multi-coil ignition system, the system can have individual coil wires. Individual coil wires in a multi-coil ignition system will register lower amounts of AC voltage. Common locations for a tachometer wire are the ignition coil itself, the back of the gauges, engine computers, and automatic transmission computers.

Important! Do not test tachometer wires with a test light or logic probe. Electronic components of the ignition system will be damaged.

How to find a tachometer wire with your multi-meter:

1. Set the ACV or AC voltage *(12V or 20V is OK).
2. Attach the (-) probe of the meter to chassis ground.
3. Start and run the vehicle.
4. Probe the wire you suspect of being the tachometer wire with the red probe of the meter.
5. If this is the correct wire the meter will read between 1V and 6V at idle, and will increase as engine RPM increases.

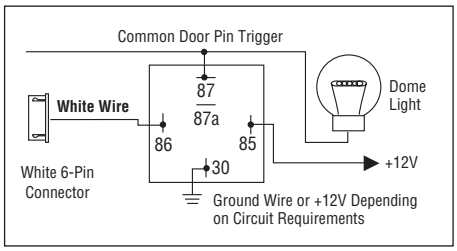
Note: No connection of this wire is required, if you use the voltage or timer checking type mode.

HC6 White 6-Pin Connector

White Wire: (-) 200mA Output

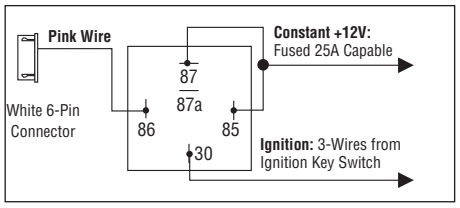
Dome Light Control Output:
This wire becomes grounded when the dome light controls circuit of the alarm is active. The current capacity of this wire is 200mA. This wire can control the operation of the interior lights. An optional relay can be used as shown.

A. Upon disarming, the interior lights will remain on for 30 seconds.
B. If the vehicle is violated, the interior light will flash for the same duration as the siren.



Pink Wire: 200mA Ignition #3 Output (Programmable Operation)

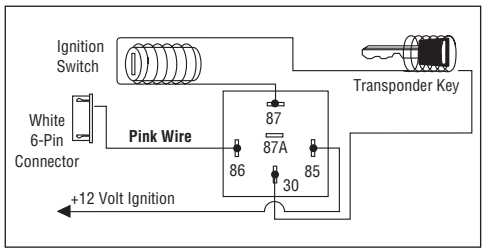
Some vehicles may require a 3rd ignition connection in order to start the vehicle engine. The Pink wire provides a 200mA (-) ground output that becomes active during engine cranking (default Setting).
If the vehicle starting system does not require a 3rd ignition connection, this wire may also be used for other functions (See Alarm Feature Programming Group 3 for programming information)



Transponder Interfacing Using ALA984 Relay (may also use optional RS-TIM bypass module)**:**
If the vehicle has transponder system installed, you will need to bypass the system while the vehicle is operating under the control of the Remote Start Unit. To do this, follow these steps:

1. You will need a transponder key that's already programmed to the vehicle.
2. Remove the trim around the ignition switch.
3. Wrap a thin (30awg) wire tightly around ignition switch 6 to 8 times and secure it.
4. About 6" down line make another loop of approximately 2" diameter.
5. Place the key inside this loop and secure it to the loop.
6. Connect one end of the 30 awg wire to pin (87) of the relay module.
7. Connect the other end of the loop wire to pin (30) of relay module.
8. Connect pin (86) to ignition, connect pin (85) to the pink wire of the white 20-pin mini connector.

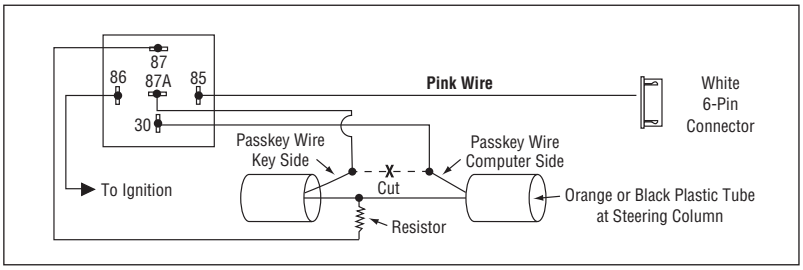
Ignition 3 Output:
Some newer vehicles use a third ignition wire which is required to start and keep the vehicle's engine running. If this is the case, wire an IGN 3 Relay (not supplied) as shown:
DO NOT CONNECT ANY VEHICLE CIRCUITS TOGETHER, THEY ARE ISOLATED FOR A REASON.



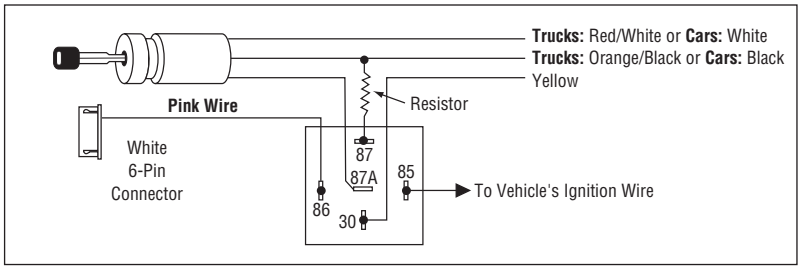
HC4 White 20-Pin Connector (continued)

Pink Wire: 200mA Ignition #3 Output (Programmable Operation) (continued)

GM VATS Key Override Using ALA984 Relay (may also use optional RS-PLM bypass module)**:**



GM VATS Key Override Using ALA985H Relay:

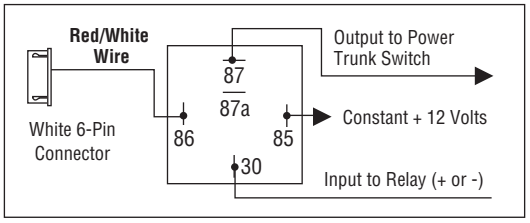


Violet/Black Wire: (-) 200mA Channel 4 Output

The Violet/Black wire is a programmable (-) output wire that operates when channel #4 is activated with the remote transmitter. The output of the wire has five different output timer settings to suit any application.
The output current of the Violet/Black is 200mA and can control (1) 30A Bosch type 12 volt relay. (See Alarm Feature Programming Group 3. The default timer setting is "Pulsed" ground)

Red/White Wire: Channel 3 (Trunk Release) Output

This wire will provide a 1 second pulse ground when Channel 3 is activated. The current capacity of this wire is 200mA. This feature allows you to remote control trunk release or other electric device. An additional relay may be required.

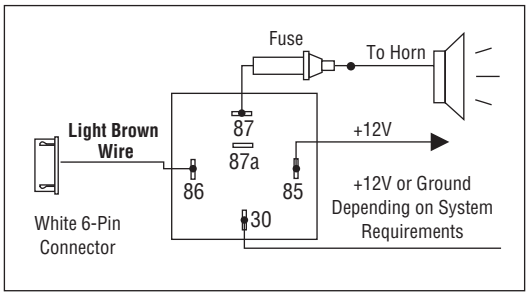


Wiring (continued)

HC6 White 6-Pin Connector (continued)

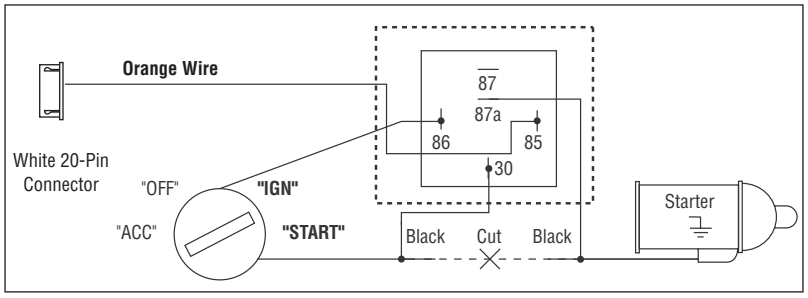
Light Brown Wire: (-) Horn Output

This wire can be used to activate the existing vehicle's horn as the alarm system's optional warning audible device. It's a 200mA transistorized low current output, and should only be connected to the low current ground output from the vehicle's horn switch/relay. When the alarm is triggered, the horn will sound (depending on the vehicle's requirement an additional relay may be required as shown).



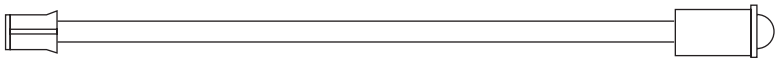
Orange/White Wire: (-) 500mA Grounded Output when Armed

This wire will become grounded when the alarm is in a armed state. This wire can be connected to an optional starter / ignition disable relay - ECU disable relay, fuel pump disable relay or it can be used to activate other functions of the vehicle such as window roll-up. The connection of an additional relay may be necessary



Plug-In Harnesses

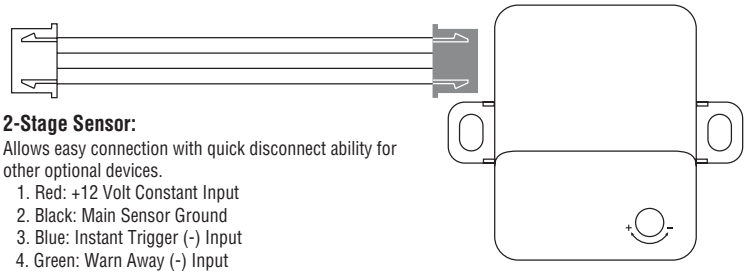
P1 Status LED Indicator



P2 Valet Switch

Plug-In Harnesses (Continued)

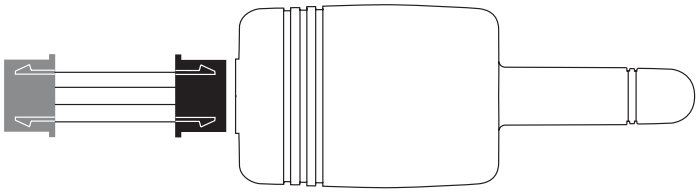
P4 Sensor



2-Stage Sensor:
Allows easy connection with quick disconnect ability for other optional devices.

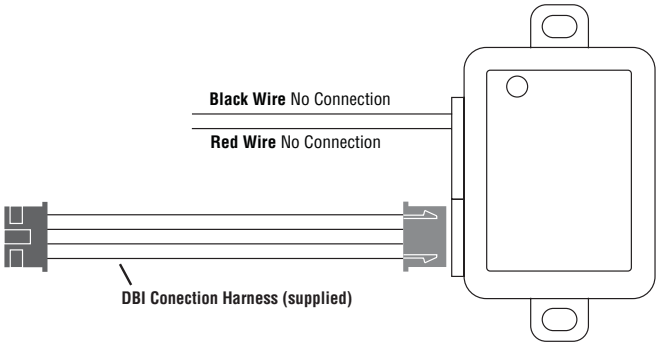
1. Red: +12 Volt Constant Input
2. Black: Main Sensor Ground
3. Blue: Instant Trigger (-) Input
4. Green: Warn Away (-) Input

P6 Antenna / Receiver



P7 Data Adapter Communication

Data Interface Harness:
Allows direct communication between Marksman Remote Start and the vehicle's data bus communication. (Data Interface Modules sold separately)



Note: The DBI Connection Harness provides power and ground to the Data Interface Module. Do not connect power and ground from Data Interface Module Harness.

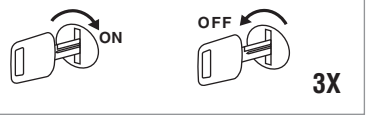
Programming the Transmitter

Programming the Remote Transmitter

(Includes the Standard Type and LCD Transmitter Type)

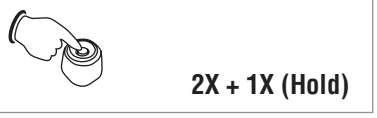
Note: This mode will only retain the last 4 remote transmitters programmed. If the transmitter memory is exceeded, the security system will start deleting transmitters from memory in chronological order.

Step 1



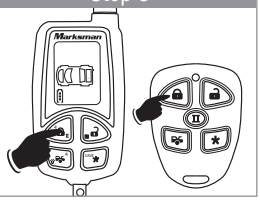
With the ignition switch in the OFF position, Turn the ignition switch On - Off - On - Off - On

Step 1



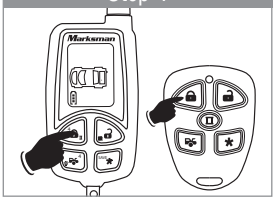
Before 15 seconds has passed, push and release the valet switch 3 times holding the button down on the 3rd press. Wait until a long chirp or beep is heard. Release the button. You are now in transmitter programming mode.

Step 3



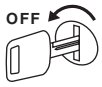
Press the "Lock" button on the first transmitter until you hear a confirmation chirp/beep. The transmitter is now coded into the system.

Step 4



Repeat for each additional transmitter.

Step 5 Exit Programming

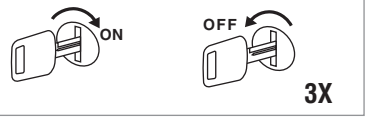


When finished, either turn off the ignition key or wait for 15 seconds to get out of transmitter programming mode. You will hear 3 long chirps/ beeps to indicate you are out of the transmitter programming mode.

Alarm Feature Programming (Group 1)

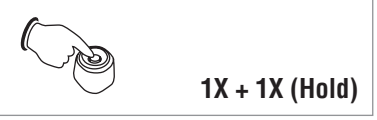
Examine the 3 different feature charts enclosed and decide which feature will get changed. Circling the feature to be changed will make the programming process much easier to perform.

Step 1



With the ignition switch in the OFF position, Turn the ignition switch On - Off - On - Off - On - Off

Step 2



Before 15 seconds has passed, push and release the valet switch 2 times holding the button down on the 2nd press. Wait until 1 short and 1 long chirp or beep is heard. Release the button. You are now in "Alarm Feature Programming (Group 1)" mode

Alarm Feature Programming (Group 1) (continued)

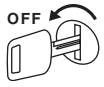
Step 3

Remote Feature Programming

Press the transmitter buttons as illustrated to adjust the features required. Keep re-pressing the transmitter button that relates to the feature you want to adjust until the correct amount of chirp/beeps is heard then move on to the next feature.

Button	One Chirp One LED Pulse *(Default Setting)*	Two Chirps Two LED Pulses	Three Chirps Three LED Pulses	Four Chirps Four LED Pulses
🔒	All Chirps On	Siren Only	Horn Only	All Chirps Off
🔓	Manual Arming	Automatic Arming without Automatic Door Locking	Automatic Arming Automatic Door Locking	
🔄	Automatic Rearm Off	Automatic Rearm On		
✱	Instant Door Ajar Error Chirp	45 Second Delay Door Ajar Warning		
🔓 + ✱	Car-Jack Mode is Off	Manual Car-Jack Mode is On	Automatic Car-Jack Mode is On	
🔒 + 🔓	Normal Function Horn Output	Horn Output for Alarm Trigger, Panic and Car-Finder Only		
🔒 + ✱	Normal Horn Output Pulse Duration	***PVID 1*** Horn Output S-S-S - L-L-L - S-S-S	***PVID 2*** Horn Output S-L-S-L	***PVID 3*** Horn Output S-S-S-L
	Five Chirps Five LED Pulses	**Six Chirps Six LED Pulses**	**Note:** Horn output settings are valid for the Brown wire and the White/Black wire when they are programmed to operate as Horn output.	
	PVID 4 Horn Output S-M-L-S-M-L	***PVID 5*** Horn Output S-S - L - S-S		

Step 5 Exit Programming



Turn On the Ignition
3 long chirps and 3 flashes of the parking lights will confirm exit of the programming mode.

Note: Waiting 15 seconds after the last command will also cause the system to automatically exit the programming mode.

Alarm Feature Programming (Group 2)

Step 1

With the ignition switch in the OFF position, Turn the ignition switch On - Off - On - Off - On - Off

Step 2

Before 15 seconds has passed, push and release the valet switch 4 times holding the button down on the 4th press. Wait until 2 short chirp/beeps + 1 long chirp/beep is heard. Release the button. You are now in "Alarm Feature Programming (Group 2)" mode.

Step 3

Remote Feature Programming

Press the transmitter buttons as illustrated to adjust the features required. Keep re-pressing the transmitter button that relates to the feature you want to adjust until the correct amount of chirp/beeps is heard then move on to the next feature.

Comfort Feature: Some vehicles (Mercedes, BMW, VW,etc.) have a special "Comfort Feature". When you lock the door with the ignition key, you keep the key in the "lock" position for about 5 or 7 seconds and the windows will close. If the vehicle has a "Comfort Feature" and you want the windows to closed upon Lock/Arm the security system, you can set the door lock output to "Comfort Feature".

Button	**One Chirp** **One LED Pulse** *(Default Setting)*	**Two Chirps** **Two LED Pulses**	**Three Chirps** **Three LED Pulses**	**Four Chirps** **Four LED Pulses**
🔒	0.8 Second Door Lock / Unlock Pulse	0.6 Second Door Lock / Unlock Pulse	3.5 Second Door Lock / Unlock Pulse	Door Lock with Comfort Feature
🔒	**Five Chirp** **Five LED Pulses**	**Six Chirp** **Six LED Pulses**		
🔒	0.8 Lock Pulse, Double 0.8 Second Unlock Pulse	0.6 Second Lock Pulse / 0.6 Second Unlock Pulse		
🔓	Ignition Key Controlled Door Lock and Unlock	Ignition Controlled Door Lock Only	Ignition Controlled Door Unlock Only	Ignition Key Door Lock Control Off
🚗	Door Lock Before Start	Door Lock After Shutdown	Door Lock Before Start and After Shutdown	Without this Feature
✱	Pathway Illumination Feature "Off"	Parking Lights "On" for 30 Seconds Upon Alarm Disarm	Parking Lights "On" for 30 Seconds When Disarmed and "On" 10 Second when armed	
🔓+ ✱	Out of Range Checking is On	Out of Range Checking is Disabled		

Alarm Feature Programming (Group 2) (continued)

Step 4 Exit Programming

Turn On the Ignition
3 long chirps and 3 flashes of the parking lights will confirm exit of the programming mode.

Note: Waiting 15 seconds after the last command will also cause the system to automatically exit the programming mode.

Alarm Feature Programming (Group 3)

Step 1

With the ignition switch in the OFF position, Turn the ignition switch On - Off - On - Off - On - Off

Step 2

Before 15 seconds has passed, push and release the valet switch 6 times holding the button down on the 6th press. Wait until 3 short chirp/beeps + 1 long chirp/beep is heard. Release the button. You are now in "Alarm Feature Programming (Group 3)" mode.

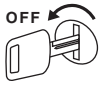
Step 3

Use the transmitter buttons as illustrated to adjust the features required. Keep repressing the transmitter button that relates to the feature you want to adjust until the correct amount of chirps/beeps is heard. Move on to the next feature.

Button	One Chirp LED One Pulse *(Factory Default Setting)*	Two Chirps LED Two Pulses	Three Chirps LED Three Pulses	Four Chirps LED Four Pulses
🔒	**HC2** Brown Wire Constant (+) Siren Output	**HC2** Brown Wire 5 Sec On - 5 Sec Off Pulsing (+) Siren Output		**HC2** Brown Wire Car Horn Type (+) Output
🔓	**HC6** White Wire = Dome Light Output	**HC6** White Wire = 2-Step Door Unlock Output	**HC6** White Wire = Factory Security Disarm Signal Output	**HC6** White Wire = Ground Output During Start (Crank)
🚗	**HC6** Light Brown Wire = Horn Output	**HC6** Light Brown Wire = Factory Security Rearm Signal Output	**HC6** Light Brown Wire = Start Status (Shock Sensor Bypass Control) Output	
✱	**HC6** Violet/Black Wire (-) Channel 4 Output 1 Pulse Output	**HC6** Violet/Black Wire (-) Channel 4 Output Latched Output and Reset with Ignition "ON"	**HC6** Violet/Black Wire (-) Channel 4 Output Output as Long as TRX Button is Held Down	**HC6** Violet/Black Wire (-) Channel 4 Output Output for 15 Seconds
🔓 + ✱	**HC8** White/Blue Wire = 1 Pulse Activate	**HC8** White/Blue Wire = 2 Pulse Activate	**HC8** White/Blue Wire = 3 Pulse Activate	

Alarm Feature Programming (Group 3) (continued)

Step 4 Exit Programming



Turn On the Ignition
3 long chirps & 3 flashes of the parking lights will confirm exit of the programming mode.

Note: Waiting 15 seconds after the last command will also cause the system to automatically exit the programming mode.

Remote Start Feature Programming

Examine the 2 feature charts enclosed and decide which features will get changed. Circling the feature to be changed will make the programming process much easier to perform.

Step 1

3X

With the ignition switch in the OFF position, Turn the ignition switch On - Off - On - Off - On - Off

Step 2

7X + 1X (Hold)

Before 15 seconds has passed, push and release the valet switch 8 times holding the button down on the 8th press. Wait until four (4) short chirps/beeps + one (1) long chirp/beep is heard. Release the button. You are now in "Remote Start Feature Programming" mode.

Step 3

Remote Start Feature Programming

Use the transmitter buttons as illustrated to adjust the features required. Keep repressing the transmitter button that relates to the feature you want to adjust until the correct amount of chirps/beeps is heard. Move on to the next feature.

Button	One Chirp One LED Pulse *(Default Setting)*	Two Chirps Two LED Pulses	Three Chirps Three LED Pulses	Four Chirps Four LED Pulses
🔒	Gasoline Engine	Diesel Engine and 10 Second Warm-Up Timer	Diesel Engine and 15 Second Warm-Up Timer	Diesel Engine and 20 Second Warm-Up Timer
	Five Chirps Five LED Pulses			
	Diesel DBI			

Remote Start Feature Programming (continued)

Step 3 (continued)

Button	One Chirp One LED Pulse *(Default Setting)*	Two Chirps Two LED Pulses	Three Chirps Three LED Pulses	Four Chirps Four LED Pulses
🔓	10 Minute Run Time	20 Minute Run Time	30 Minute Run Time	5 Minute Run Time
🚗	Factory Alarm Disarm when trunk release (CH#3) is activated	Without this Feature		
✱	Constant Parking Light Output When Running on Remote Start	Flashing Parking Light Output When Running on Remote Start		
✱	Press ✱ - ✱ to Activate Remote Start	Press 🔒 - ✱ to Activate Remote Start	Press ✱ to Activate Remote Start	

Button	One Chirp, LED One Pulse	Two Chirps, LED Two Pulses	Three Chirps, LED Three Pulses
🔒+✱	*(Factory Default Setting)* Turbo Timer Control Function is Off. The alarm can not be armed while the engine is running.	The vehicle has an aftermarket turbo timer installed. The alarm system can be armed with the engine running. The shock sensor will be bypassed as long as the engine is running.	The vehicle has an aftermarket turbo timer installed. the alarm system can be armed with the engine running. The shock sensor will be bypassed for 3 minutes.

Button	Four Chirps, LED Four Pulses	Five Chirps, LED Five Pulses	Six Chirps, LED Six Pulses
🔒+✱	Built-in Turbo Timer Control is Active Press the (🔓+✱ buttons before removing the ignition key to activate the **1** minute Turbo timer control. The alarm system can be armed and the shock sensor will be bypassed.	Built-in Turbo Timer Control is Active Press the (🔓+✱ buttons before removing the ignition key to activate the **3** minute Turbo timer control. The alarm system can be armed and the shock sensor will be bypassed.	Built-in Turbo Timer Control is Active Press the (🔓+✱ buttons before removing the ignition key to activate the **5** minute Turbo timer control. The alarm system can be armed and the shock sensor will be bypassed.

Button	One Chirp LED One Pulse *(Factory Default Setting)*	Two Chirps LED Two Pulse	Three Chirps LED Three Pulse	Four Chirps LED Four Pulse
🔓+✱	3 Hour Time Start	2 Hour Time Start		

Step 4 Exit Programming

Turn On the Ignition
3 long chirps & 3 flashes of the parking lights will confirm exit of the programming mode.

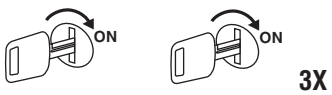
Note: Waiting 15 seconds after the last command will also cause the system to automatically exit the programming mode.

Engine Crank Detection Programming

Enter the crank detection programming mode, select the engine checking type, then follow the procedures to test and re-set the cranking perimeters as needed.

Note: The default detection setting is "Voltage Detection". Once your wiring is completed, you can press the ✱ button (2) times and start the engine to make sure all your connections are good to this point.

Step 1



With the ignition switch in the OFF position, turn the ignition switch On - Off - On - Off - On - Off.

Step 2

Before 15 seconds has passed, push and release the valet switch 10 times holding the button down on the 10th press. Wait for 5 short chirps/beeps + 1 long chirp/beep. Release the button. You are now in "Engine Crank Detection Programming" mode.

Button	One Chirp LED One Pulse *(Factory Default Setting)*	Two Chirps LED Two Pulse	Three Chirps LED Three Pulse	Four Chirps LED Four Pulse
🔒 + 🔓	Voltage Checking Type	Tachometer Checking Type	Fixed Crank Mode	
🔓	**RPM Learning Start Timer:** 0.6 second (1 chirp)	0.8 second (2 chirps) 1.0 second (3 chirps) 1.2 second (4 chirps)	1.4 second (5 chirps) 1.6 second (6 chirps) 1.8 second (7 chirps)	2.0 second (8 chirps) 3.0 second (9 chirps) 4.0 second (10 chirps)
🚗	Low Check Level	Hi Check Level		
✱ - ✱	Start/Stop the System for Testing and Adjustment			
🔓 - ✱	Shock Sensor Test Mode is Off	Shock Sensor Test Mode is On		
🔒	**Exit the Programming Mode** (3 long chirps and 3 parking light flashes to confirm this exit)			

Engine Crank Detection Programming Explanations

Use the transmitter buttons as illustrated to adjust the features required. Keep re-pressing the transmitter button that relates to the feature you want to adjust until the correct amount of chirp/beeps is heard. Move on to the next feature.

In this programming group you will set the type of engine starting detection you want to use in your installation. There are 3 types available:

1. **Tachometer (RPM) Detection:** (Most reliable and recommended) This type of detection requires a wire connection to the vehicles ignition coil. You must also "teach" the remote start unit the engine idle RPM level before you can start the engine by remote.
2. **Voltage Detection:** This method detects the drop and rise in the battery voltage when the vehicle is started by remote. This type of detection requires a solid main power input connection but it does not require any additional hard wire connections.

Engine Crank Detection Programming Explanations (continued)

3. Elapsed Timer: This method is the easiest for installation but is not always the best method for year round usage (Summer and Winter). To operate this method, you will program a specific time window for the remote start to crank the engine. Battery strength, environment and the aging process of the vehicle may require the timer to reset from time to time or season to season.

Step 3A Crank Detection Programming and Procedure

Press Buttons	Chirp/ LED Flash	Checking Type	Follow Programming and Test Procedure
🔒 + 🔓	1	Voltage Type	**A.** Press ✱ two times to start the engine. Allow engine to run for more than 10 seconds. **B.** If engine starts without cranking too long or too short and runs for more than 10 seconds, press 🔒 to exit programming mode (3 chirps confirm exit). Programming is complete. **C.** If the engine shuts off before 10 seconds, press 🚗 to change "low check level" to "hi check level" (2 chirps). Repeat A/B above. **D.** If the engine cranks too long or too little, press 🔓 to select a different crank duration (see chart enclosed). Repeat A/B above.

Step 3B Crank Detection Programming and Procedure

Press Buttons	Chirp/ LED Flash	Checking Type	Follow Programming and Test Procedure
🔒 + 🔓	2	Tachometer Type	**A.** Learn the engine idle RPM. **1.** Push and release the 🔓 button on the transmitter **2.** Start the engine with the ignition key and allow the choke to turn off. **3.** With the engine at true idle speed, press and hold the valet switch until you hear (1) long chirp and the LED is on solid for two seconds. **3A.** If you do not get a response from holding down the valet switch, check your tach connection. It may be loose or incorrect. **4.** Turn off the ignition key. **B.** Press ✱ two times to start the engine. Allow engine to run for more than 10 seconds. **C.** If engine starts without cranking too long, press 🔓 to exit programming mode (3 chirps confirm exit). Programming is complete. **D.** If the engine cranks too long, press 🚗 to change "high check level" to "low check level" (1 chirps). Repeat B/C above.

Step 3C Crank Detection Programming and Procedure

Press Buttons	Chirp/ LED Flash	Checking Type	Follow Programming and Test Procedure
🔒 + 🔓	3	Fixed Crank Mode	**A.** Press ✱ two times to start the engine. Allow engine to run for more than 10 seconds. **B.** If engine starts without cranking too long or too short, press 🔒 to exit programming mode (3 chirps confirm exit). Programming is complete. **C.** If the engine cranks too long or too little, press 🔓 to select and different crank duration (see chart enclosed). Repeat A/B above.

Shutdown Diagnostics

The unit has the ability to report the cause of the last shutdown of the remote start system.

1. Turn the ignition switch to "On" position.
2. Press the ( ) button on the transmitter
3. The LED will now report the last system shutdown by flashing for 3 cycles in the following grouped patterns:

LED Flashes	Shutdown Mode	
1	(-) Safety Shutdown Input (Hood)	1. Close the Hood 2. Check White/Black Wire Connection (Black 8-Pin Mini)
2	(+) Safety Shutdown Input (Brake) or Neutral Safety Switch Input Fail	1. Set the Hand Brake 2. Check White/Violet Wire Connection (Black 8-Pin Mini) 3. Move the Enable Toggle Switch to "On" Position (If Installed) 4. Move the gear selector to "Park"/ "Neutral" Position 5. Check Black/White Wire Connection (Black 8-Pin Mini)
3	No RPM (Engine Checking Tach) Low Voltage (Engine Checking Voltage)	Check White/Red Wire Connection Program the "Check Level" from "Hi Check Level" to "Low Check Level"
5	Over-Rev	
6	System Timed-Out	
7	Transmitter	
8	Tach Signal has Not Been Learned	Check Tach Signal Feature Programming

Safety Testing Your Installation

Caution! The follow procedure must be performed after the installation of the Remote Start Device. It is the responsibility of the installing technician to complete these tests. Failure to test the unit in the following manner may result in personal injury, property damage, or both.

1. Test the brake shutdown circuit: With the vehicle in "Park" (P), start the vehicle using the remote transmitter, Once the engine is running, press the brake pedal. The vehicle should shut down immediately. If the vehicle continues to run, check the brake circuit White/Violet wire.

2. Test the "Hood Pin" shutdown circuit: Start the vehicle using the remote transmitter, Once the engine is running, pull the hood release and raise the hood. The vehicle should shut down immediately. If the vehicle continues to run, check the hood pin "White/Black" wire connection.

3. Neutral Start Safety Test:

A. Set the vehicle parking brake.

B. Block the drive wheels to prevent vehicle movement.

C. Sitting in the vehicle, turn the ignition switch "On" or "Run" position. But do not start the engine.

D. Step on the brake pedal and shift the gear selector into "Drive" (D).

E. Put you foot over the brake pedal but do not press down on it. Be ready to step on the brake to shut down the Remote Start Device.

F. Start the vehicle using remote transmitter.

a. If the starter does not engage, the test is complete.

b. If the starter engages, immediately step on the brake pedal to shut down the system, recheck your Violet wire (6-Pin White, Starter Output) connection. The heavy gauge Violet wire must be connected to the ignition switch side of the Neutral Start Switch. If the vehicle you are working on does not have an Electrical Neutral Safety Switch, it will be necessary to reconfigure the Remote Starts Wiring to accommodate this vehicle. The information concerning the Mechanical Neutral Safety Switch provided below will help you to determine if the vehicle you are working on has this type of safety switch and will provide alternate wiring methods to accommodate this situation.

Shock Sensor Test Mode

In this test mode, the installer can save time adjusting the optional sensor sensitivity without using the traditional arming/disarming procedures to adjust the sensor.

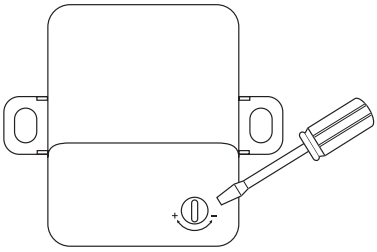
Step 1

With the ignition switch in the OFF position, turn the ignition switch On - Off - On - Off - On - Off.

Step 2

Before 15 seconds has passed, push and release the valet switch 6 times holding the button down on the 6th press. Wait until five (3) chirps/beeps and a long chirp then release it. You are now in “Shock Sensor” Test mode.

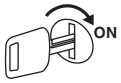
Step 3 Adjust the Shock Sensor



Press the button. 2 chirps will confirm you are now in Shock Sensor test mode.

1. Walk around the vehicle and slap the body panels with the palm of your hand
2. A short Chirp indicates a pre-warning level detection
3. A long Chirp indicates a system trigger level detection
4. Adjust the sensor with a flat blade screwdriver. Continue to test the sensor until you reach the desired settings.

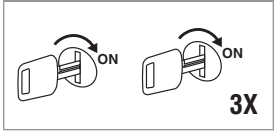
Step 4 Exit Programming



Turn On the ignition key to exit the test mode. The horn/siren will chirp 3 long chirps and the parking lights will flash 3 times.

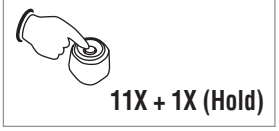
Returning Programmable Alarm Features to Factory Default Settings

Step 1



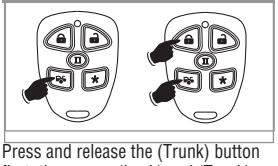
Turn the ignition switch from the OFF position to the ON position 3 times leaving it in the Off position the third time.

Step 2



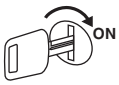
Before 15 seconds has passed, push and release the valet switch 12 times. Holding on the 12th press. You will hear 6 short beeps. Release the button.

Step 3



Press and release the (Trunk) button first, then press (Lock) and (Trunk) button on the transmitter together for 5 seconds, there will be a six chirp confirmation with 3 long chirps and 3 parking light flashes to confirm the system "Start Features 1 and 2 Programming" all returned to the factory default settings.

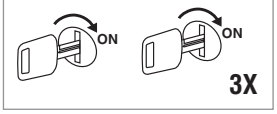
Step 4: Exit Programming



Turn On the Ignition
3 long chirps and 3 flashes of the parking lights will confirm exit of the programming mode.
Note: Waiting 15 seconds after the last command will also cause the system to automatically exit the programming mode.

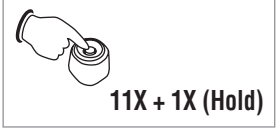
Returning All Programmable Features to Factory Default Settings

Step 1



Turn the ignition switch from the OFF position to the ON position 3 times leaving it in the Off position the third time.

Step 2

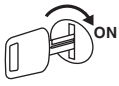


Before 15 seconds has passed, push and release the valet switch 12 times. Holding on the 12th press. You will hear 6 short beeps. Release the button.

Step 3

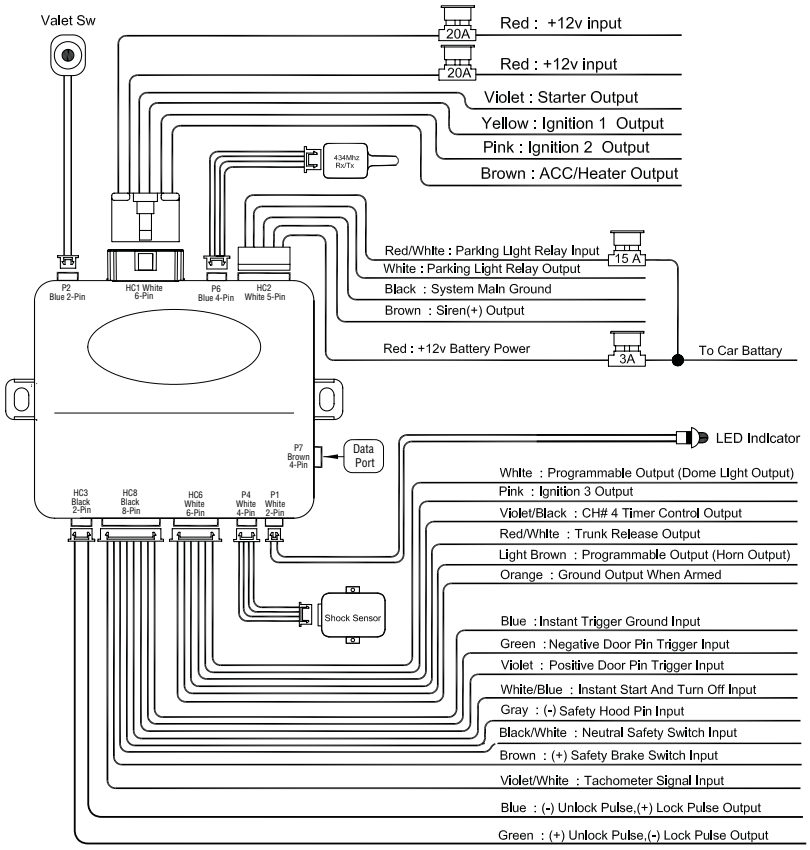
Press (Lock) and (Trunk) button on the transmitter together for 5 seconds, there will be a six chirp confirmation with 3 long chirps and 3 parking light flashes to confirm the system "Start Features 1 and 2 Programming" all returned to the factory default settings.

Step 4: Exit Programming



Turn On the Ignition
3 long chirps and 3 flashes of the parking lights will confirm exit of the programming mode.
Note: Waiting 15 seconds after the last command will also cause the system to automatically exit the programming mode.

Wiring Diagram


Valet Sw
20A
Red : +12v input
20A
Red : +12v input
Violet : Starter Output
Yellow : Ignition 1 Output
Pink : Ignition 2 Output
Brown : ACC/Heater Output
434Mhz RxTx
Red/White : Parking Light Relay Input
15 A
White : Parking Light Relay Output
Black : System Main Ground
Brown : Siren(+) Output
Red : +12v Battery Power
3A
To Car Battary
P2 Blue 2-Pin
HC1 White 6-Pin
P6 Blue 4-Pin
HC2 White 5-Pin
LED Indicator
P7 Brown 4-Pin
Data Port
White : Programmable Output (Dome Light Output)
Pink : Ignition 3 Output
Violet/Black : CH# 4 Timer Control Output
Red/White : Trunk Release Output
Light Brown : Programmable Output (Horn Output)
Orange : Ground Output When Armed
HC3 Black 2-Pin
HC8 Black 8-Pin
HC6 White 6-Pin
P4 White 4-Pin
P1 White 2-Pin
Shock Sensor
Blue : Instant Trigger Ground Input
Green : Negative Door Pin Trigger Input
Violet : Positive Door Pin Trigger Input
White/Blue : Instant Start And Turn Off Input
Gray : (-) Safety Hood Pin Input
Black/White : Neutral Safety Switch Input
Brown : (+) Safety Brake Switch Input
Violet/White : Tachometer Signal Input
Blue : (-) Unlock Pulse,(+) Lock Pulse Output
Green : (+) Unlock Pulse,(-) Lock Pulse Output

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